

~~ARTICLE APPEARED
ON PAGE 9A~~NEW YORK TIMES
17 August 1985

STAT

Curb on Campus Computers: Pentagon vs. Academia

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The Defense Department's plan to prevent the use of supercomputers at American universities by students and scholars from the Soviet bloc marks a sharp new turn in the Reagan Administration's crackdown on the leakage of high technology, university officials say.

News Analysis The plan, which may require a national security directive signed by President Reagan, has touched off a barrage of criticism from university officials, who contend that the move would undermine academic freedom and the quality of American academic science.

"I don't think we've ever seen a curb on scientific interchange quite like it," Robert M. Rosenzweig, president of the Association of American Universities, said in an interview. "It is bad policy to turn open institutions into closed ones. It is even worse to make university faculties become the policemen of advanced technology."

Officials in the Pentagon and the State Department have periodically placed restrictions on the activities of individual Soviet and Chinese scientists visiting American universities. But Administration officials concede that never before has the Government tried to set broad rules restricting foreigners' access to nonclassified research or equipment.

The officials say such rules are necessary now because supercomputers are being placed on campuses for the first time. Their concern is not that Soviet scholars would steal supercomputer technology itself but that they would make use of the computers, the world's fastest, to solve key problems in aerodynamics, nuclear weaponry and code-breaking.

"It simply doesn't make sense to allow foreign nationals access here to militarily sensitive machines that we won't export to their home country," said Stephen D. Bryen, Deputy Assistant Secretary of Defense for international economic, trade and security policy.

The dispute comes at a particularly unstable time in the always uneasy relationship between the Pentagon and academia. After a series of conflicts over the publication of sensitive research papers, the Defense Department late last year tried to appease academics' concerns by saying it would intervene only to protect classified or potentially classified research. But the four supercomputers now being installed at separate university centers by the National Science Foundation are specifically intended for nonclassified basic research.

Soviet Maintains Tight Curbs

No one doubts that the Soviet Union covets technology used on many leading American campuses. Without question, experts say, Soviet scientists have benefited tremendously in recent years from the Western tradition of freely exchanging and publishing scientific data. Relatively little Soviet research is published, and the Soviet Union maintains tight curbs on visiting American scholars. In any case, American scholars say Soviet computer technology is so backward that they would learn little even with greater access.

In recent years, Pentagon officials say, Soviet scientists have made private advances to several American colleagues, asking for time on supercomputers to develop, among other things, a model of the atmospheric disaster many scientists believe would follow a major nuclear explosion.

"There is an obvious spillover between a hypothetical study and the effects of a nuclear explosion on a target in the U.S.," said Donald J. Goldstein, the Defense Department's principal director of trade security policy. "I'm not sure I want to assist them in answering those questions."

Limits Seen as Logical

Other Pentagon officials, while conceding that the plan regarding supercomputers goes considerably beyond the export controls designed to keep key technologies out of Soviet hands, say restricting access to supercomputers is indisputably logical. So far, they maintain, the Soviet Union has obtained none of the 125 or so supercomputers in existence.

"Don't you think there is a certain irony," asked Mr. Goldstein, "in allowing the Soviets access to computers here that we won't sell them?"

Providing access for scholars around the world, however, is precisely what American scientists, and some in the Government, have been racing to accomplish. The National Science Foundation's \$200 million supercomputer initiative, announced last February, seeks to make the technology available to top scientists whose work in such fields as chemistry, physics and aerodynamics depend on the machines.

Much of that work will be done by foreigners. Several recent studies show that more than half the engineering students now pursuing doctoral degrees in the United States are citizens of foreign countries, and most major research universities have "visiting scholar" programs, often involving scientists from the Soviet bloc. Academics say it would be counterproductive to put limits on the research those foreigners conduct.

"From a national security perspective," Mr. Rosenzweig said, "I think we are far better to devote our energies to getting as good as we can in these areas, and not waste our time keeping others from eating little morsels of corn that fall off the table."

Other academics contend that the Pentagon's premise that Soviet scholars would use the machines for critical military applications is ridiculous. They doubt the Soviet scientists would risk tipping their hands on key military projects by using computers in the United States. And they doubt that Soviet scholars could get the computing time it would take to conduct truly extensive research.

"The idea that any university is somehow going to allow unrestricted access by unknown persons for unknown activitives is laughable," said Michael Levine, a physics professor at Carnegie-Mellon University in Pittsburgh.

Moreover, university officials contend the task of policing the activities of a select group of scholars and students is repugnant to academic freedom. In early 1982, for example, Stanford University refused to enforce State Department restrictions on Nikolay V. Umnov, a Soviet robotics expert. The university canceled his visit, saying that once the State Department decided to let him in the country it could not expect Stanford to follow him around.

"Very simply, we are not about to have someone tell us who we can or cannot have as students or to deny them access to some of our facilities," said Thomas R. Rogers of Cornell University, site of one of the four supercomputer centers. "In the worst case, we might have to withdraw from the project. I hope it won't come to that."

Caught in the middle in the dispute is the National Science Foundation, a Federal agency. "It's a very, very tricky issue," said Charles Herz, the foundation's general counsel. "The flow of ideas can't be controlled like the flow of hardware. And as universities get into more and more high technology, it's going to be hard to avoid the recognition that campus research could have a very real effect on national security."